

Remarks

Claims 1-10, 12-21, 24, 27, 32, 34-36, and 38-40 are pending upon entry of the foregoing amendments.

Amendments to the Claims

Claim 34 has been amended for greater clarity, and new claims 38-40 have been added. Support for the amendments can be found, for example, at page 15, lines 3-20; and page 18, lines 11-30.

Rejections Under 35 U.S.C. § 103

Claims 1, 12, 17-20, 24, 27, 32, and 34-36 were rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent 6,349,232 to Gordon (hereinafter "Gordon") in view of U.S. Patent 5,660,846 to Cheikh (herein after "Cheikh"). Claims 2-10 and 13-16 were rejected under 35 U.S.C. § 103(a) as obvious over Gordon and Cheikh, in further view of Rubin et al., "The Potential of Parathyroid Hormone as a Therapy for Osteoporosis," *Int. J. Fertil.* 47(3):103-15 (2002) (hereinafter "Rubin"). Claim 21 was rejected under 35 U.S.C. § 103(a) as obvious over Gordon and Cheikh, in further view of U.S. Patent No. 6,011,011 to Hageman (hereinafter "Hageman"). The rejections are respectfully traversed.

Gordon does not teach, enable, or suggest disintegration of an electrically conductive reservoir cap by electrothermal ablation. Rather, Gordon teaches methods that do not include electrothermal ablation of a discrete reservoir cap. In one method, Gordon uses a *resistance heating element 272* placed against the outer surface of or imbedded in a cell enclosure **270**, as illustrated in FIGS. 9, 10, and 11A-C. See Col. 3, Line 58 to Col. 4, Line 2. Significantly, **the electrical resistance heating element is a *distinct* structure from the cell enclosure.**

Gordon teaches that heat must flow *from* heating element **272** *to* the cell enclosure **270**. In contrast, Applicants' claimed methods and devices require a discrete, electrically conductive reservoir cap that *itself* is heated by *internally generated heat* caused by passage of an electrical current therethrough. The heating is primarily localized within the reservoir cap. The internal heating is sufficient to ablate the reservoir cap itself (i.e., electrothermal ablation) thereby exposing the reservoir opening over which the reservoir cap previously existed. This is different from Gordon's teaching of the use of a *separate* heating element. Gordon does not teach that a discrete reservoir cap *itself* can serve as the heating element.

To further illustrate, Gordon teaches that heat from electrical resistance heating element **272** "causes the wall of cell enclosure **270** to break, melt, disintegrate or otherwise become permeable." Col. 8, Lines 57-61. **In contrast, with Applicants' devices and methods heating the reservoir cap causes the reservoir cap itself to disintegrate. Gordon does not teach or suggest a structure that serves both as a resistive heating element and structural boundary between the reservoir contents and outer environment. In contrast, Applicants' discrete reservoir cap is a single structure that provides both functions.**

Furthermore and contrary to the allegation set forth in the office action, FIGS. 9-11D do not show or disclose or suggest a discrete reservoir cap. There is no discrete reservoir cap included within or apart from resistance heating elements **272** or cell enclosures **270**. The Examiner appears to be inadvertently and improperly reading Applicants' disclosure into Gordon. Rather, Gordon implies that the "cell enclosure" **270** means the entire body structure surrounding the pet care substance. Gordon's description of the cell enclosure simply does not distinguish between a substrate structure and reservoir cap structure. A person of ordinary skill in the art therefore could not read FIGS. 9-11D as teaching any particular portion of cell

enclosure **270** to correspond to a reservoir cap. Gordon fails to disclose or suggest a reservoir in a substrate having an opening that is covered by a *discrete reservoir cap*, formed such that a substance can pass out of (or into) the reservoir through the pre-defined opening once the reservoir cap is actively disintegrated by heat generated locally and internally within the reservoir cap. Moreover, Gordon fails to teach or suggest that melting or disintegration of the cell enclosure **270** occurs at any discrete, pre-selected area—in contrast to Applicants' devices, wherein the reservoirs have defined openings closed off by one or more discrete reservoir caps.

In the other method mentioned by Gordon, “electrodes **271** are placed on top of cell enclosure **270** and current flows through cell enclosure **270** itself.” Col. 9, Lines 45-49 and FIG. 11D. Col. 3, Line 66 to Col. 4, Line 2 discloses this figure as an illustration of assembling *electrical resistance heating elements* with cell enclosures. Accordingly, it is unclear whether electrode **271** is heated like elements **272**. It is also unclear how or whether cell enclosure **270** in this embodiment is heated, as the mere passage of electrical current will not necessarily result in heating sufficient to cause the cell enclosure to rupture, melt or disintegrate. Thus, Gordon fails to provide sufficient—or any, for that matter—teaching of design, structure, or materials of construction sufficient for one skilled in the art to make, use, or operate the embodiment of FIG. 11D without undue experimentation.

Even if Gordon were assumed to enable one skilled in the art to be able to rupture or disintegrate cell enclosure **270** by passing electrical current through it with electrodes **271**, Gordon provides absolutely no teaching or suggestion that the cell enclosure **270** in FIG. 11D includes one or more discrete reservoir caps and that heat is generated within these reservoir caps and confined locally to ablate or disintegrate *only* these discrete reservoir caps. Applicants submit that nothing in Gordon suggests that the cell enclosure **270** could or should be ruptured by

heat generated internally within a discrete reservoir cap to electrothermally ablate the reservoir cap.

Assuming one of ordinary skill in the art at the time of Applicants' invention would have had a reason (which it is respectfully submitted, the artisan of ordinary skill would not) to combine Gordon with Cheikh, Rubin, and/or Hageman, the combination of references nevertheless would fail to disclose or suggest a device that includes structures or methods for electrothermal ablation of a discrete reservoir cap to initiate release of PTH, as required by Applicants' claims.

In sum, the prior art of record fails to disclose or suggest a device or method whereupon passage of an electric current *through a discrete reservoir cap* via a pair of conducting leads *the reservoir cap itself* is disintegrated to create or expose a reservoir opening. That is, the prior art of record fails to teach or suggest means for disintegrating a reservoir cap by electrothermal ablation. Applicants' design for precisely exposing a predefined reservoir opening is not taught or suggested by the prior art.


Conclusions

Allowance of each of the pending claims 1-10, 12-21, 24, 27, 28, 32, 34-36, and 38-40 is

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AMENDMENT AND
RESPONSE TO OFFICE ACTION

therefore respectfully solicited. The undersigned kindly invites the Examiner to contact him by telephone if any outstanding issues can be resolved by conference or examiner's amendment.

Respectfully submitted,

By: 
Kevin W. King
Reg. No. 42,737

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SUTHERLAND ASBILL & BRENNAN LLP
999 Peachtree Street, N.E.
Atlanta, Georgia 30309-3996
Tel. No. (404) 853-8068
Fax No. (404) 853-8806